



**MANHOLE INSPECTION PROGRAM
FOR THE
JONES FALLS SEWERSHED**

CITY OF BALTIMORE PROJECT NO. 994



MANHOLE CONDITION RATING MANUAL

**JONES FALLS SEWERSHED
CITY OF BALTIMORE PROJECT 994**

PREPARED BY

**RUMMEL, KLEPPER & KAHL, LLP
CONSULTING ENGINEERS
BALTIMORE, MD**

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Rummel, Klepper & Kahl, LLP
Consulting Engineers
Baltimore, MD

**MANHOLE RATING SYSTEM
FOR THE
JONES FALLS SEWERSHED EVALUATION**

The Following Criteria Shall Be Used When Establishing The 1 - 5 Condition Rating For Manhole Structures Located In The Jones Falls Sewershed
Rating Scale: 1 - 5 (1 = Good, 5 = Bad)

1	MH Should Be In Like New Condition With No Visible Signs Of Deterioration, Defects Or Significant Signs Of Inflow And/OR Infiltration.
2	MH Should Have Only Minor Defects That Do Not Affect The Sewer's Flow Characteristics Or The Structural Condition of the MH. Only Minor Signs Of Inflow And/OR Infiltration Should Be Visible
3	<p>MH Should Contain One Or More Of The Following Characteristics:</p> <ul style="list-style-type: none"> Evidence Of Inflow (Leakage Around Frame & Cover) Evidence Of Infiltration (Wall Staining, Etc.) Evidence Or Surcharging < 2 Missing MH Steps Frame Offset < 4-Inches Minor Cracking Of The MH Cover < 20% Missing Or Deteriorated Bricks In The Frame Adjustment Section Minor Evidence Of Infiltration Around The Frame And/OR Frame Adjustment Section Light Root Intrusion (Not Affecting Sewer Flow) Light Debris (Not Affecting Sewer Flow) Light Grease (Not Affecting Sewer Flow) Minor Cracks That Do Not Affect The Structural Condition Of The MH Deterioration In Only (1) Area Of The MH
4	<p>MH Should Contain A Minimum Of Two Or More Of The Following Characteristics:</p> <ul style="list-style-type: none"> Significant Signs of Inflow (Leakage Around Frame And Cover) Evidence Of Multi-Point Infiltration (Staining) Or Active Infiltration Active Surcharging Of The MH 3 Or More Missing MH Entry Steps Frame Offset > 4-Inches Cracked MH Frame And/OR Cover > 20% Missing Or Deteriorated Bricks In The Frame Adjustment Section Evidence Of Significant Infiltration Around The Frame And/OR Adjustment Section Medium Root Intrusion Heavy Debris (Affecting Sewer Flow) Heavy Accumulation Of Grease (Affecting Flow) Major Cracks Affecting The Structural Condition Of The MH Missing Bricks Or Other Small Portions Of The MH Damage To Bench Affecting Flow Structure Deterioration In Multiple Areas
5	<p>Manhole Is In Danger Of Failure Or Collapse</p> <ul style="list-style-type: none"> Severe Deterioration With Voids/Soil Visible Active Infiltration Missing MH Cover Or Pieces Of Frame And/OR Cover Heavy Root Intrusion Major Cracks With Pieces Missing System Blockage (Active Surge Of Overflow)

**MANHOLE INSPECTION TERMS
FOR THE
JONES FALLS SEWERSHED**

The Following Criteria Shall Be Used When Documenting Defects In Manhole Structures Located In The Jones Falls Sewershed

1

MH Should Be In Like New Condition With No Visible Signs Of Deterioration, Defects Or Significant Signs Of Inflow And/Or Infiltration.



MH Should Be In Like New Condition With No Visible Signs Of Of Deterioration, Defects Or Significant Signs Of Inflow And/Or Infiltration.



Only Minor Inflow Staining on MH Wall



Only Minor Infiltration Staining on MH Wall

**MANHOLE INSPECTION TERMS
FOR THE
JONES FALLS SEWERSHED**

The Following Criteria Shall Be Used When Documenting Defects In Manhole Structures Located In The Jones Falls Sewershed

2

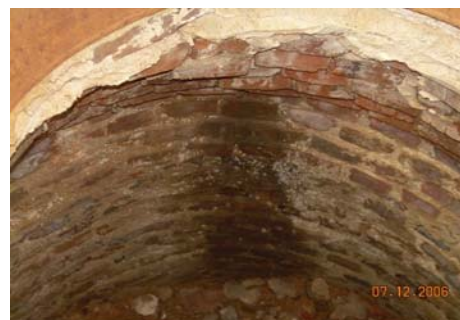
MH Should Have Only Minor Defects That Do Not Affect The Sewer's Flow Characteristics Or The Structural Condition of the MH. Only Minor Signs Of Inflow And/Or Infiltration Should Be Visible.



MH Should Have Only Minor Wall Infiltration And/Or Defects That Do Not Affect The Sewer's Flow Characteristics Or The Structural Condition of the MH.



Only Minor Signs Of Inflow/Infiltration At The Rim & Adjustment Section Should Be Visible



Only Minor Signs Of Infiltration Should Be Visible.

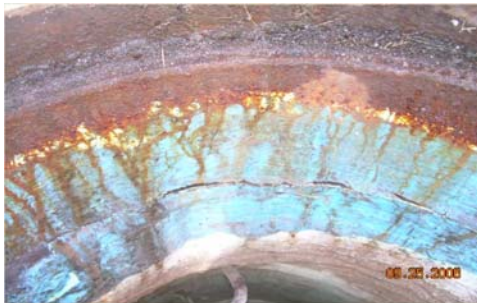
MANHOLE RATING SYSTEM FOR THE JONES FALLS SEWERSHED

The Following Criteria Shall Be Used When Documenting Defects In Manhole Structures Located
In The Jones Falls Sewershed

Rating Scale: 1 - 5 (1 = Good, 5 = Bad)

3

MH Should Contain One Or More Of The Following Characteristics:
 Evidence Of Inflow (Leakage Around Frame & Cover)
 Evidence Of Infiltration (Wall Staining, Etc.)
 Evidence Or Surcharging
 < 2 Missing MH Steps
 Frame Offset < 4-Inches
 Minor Cracking Of The MH Cover
 < 20% Missing Or Deteriorated Bricks In The Frame Adjustment Section
 Minor Evidence Of Infiltration Around The Frame And/OR Frame Adjustment Section
 Light Root Intrusion (Not Affecting Sewer Flow)
 Light Debris (Not Affecting Sewer Flow)
 Light Grease (Not Affecting Sewer Flow)
 Minor Cracks That Do Not Affect The Structural Condition Of The MH
 Deterioration In Only (1) Area Of The MH



Evidence Of Inflow (@ Frame/Cover)



Evidence Of Infiltration (Wall Staining, Etc.)



Evidence Or Surcharging (Rags On Steps, Etc.)



< 2 Missing MH Steps



Frame Offset < 4-Inches



Cracked MH Cover (Minor)



< 20% Missing Or Deteriorated Bricks
In The Frame Adjustment Section



Minor Evidence Of Inflow/Infiltration
Around The Frame Or Adjustment Section



Light Root Intrusion (Not Affecting Flow)



Light Debris (Not Affecting Flow)



Light Grease (Not Affecting Flow)



Minor Cracking



Deterioration In (1) Area Of The MH

MANHOLE RATING SYSTEM FOR THE JONES FALLS SEWERSHED

The Following Criteria Shall Be Used When Documenting Defects In Manhole Structures Located
In The Jones Falls Sewershed

Rating Scale: 1 - 5 (1 = Good, 5 = Bad)

4

MH Should Contain A Minimum Of Two Or More Of The Following Characteristics:
 Significant Signs of Inflow (Leakage Around Frame And Cover)
 Evidence Of Multi-Point Infiltration (Staining) Or Active Infiltration
 Active Surcharging Of The MH
 > 2 Missing MH Entry Steps
 Frame Offset > 4-Inches
 Cracked MH Frame And/Or Cover
 > 20% Missing Or Deteriorated Bricks In The Frame Adjustment Section
 Evidence Of Significant Infiltration Around The Frame And/Or Adjustment Section
 Medium Root Intrusion
 Heavy Debris (Affecting Sewer Flow)
 Heavy Accumulation Of Grease (Affecting Flow)
 Major Cracks Affecting The Structural Condition Of The MH
 Missing Bricks Or Other Small Portions Of The MH
 Damage To Bench Affecting Flow
 Structure Deterioration In Multiple Areas



Signs of Inflow (Leakage @ Frame/Cover)



Multi-Point Evidence (Staining) Or Active Infiltration



Active Surcharging Of The MH



> 2 Missing MH Entry Steps



Frame Offset > 4-Inches



Cracked MH Frame And/Or Cover



> 20% Missing Or Deteriorated Bricks
In The Frame Adjustment Section



Evidence Of Inflow/Infiltration Around
The Frame Or Adjustment Section



Medium Roots



Accumulation Of Grease (Affecting Flow)



Accumulation Of Debris (Affecting Flow)



Major Cracks



Missing Bricks



Structure Deterioration In Multiple Areas



Structure Deterioration In Multiple Areas

MANHOLE RATING SYSTEM FOR THE JONES FALLS SEWERSHED

The Following Criteria Shall Be Used When Documenting Defects In Manhole Structures Located
In The Jones Falls Sewershed

Rating Scale: 1 - 5 (1 = Good, 5 = Bad)

5

Manhole Is In Danger Of Failure Or Collapse
Severe Deterioration With Voids/Soil Visible
Active Infiltration
Missing MH Cover Or Pieces Of Frame And/Or Cover
Heavy Root Intrusion
Major Cracks With Pieces Missing
System Blockage (Active Surge Of Overflow)



Manhole Is In Danger Of Failure
With Voids And Soil Visible



Severe Deterioration W/ Voids/Soil Visible



Active Infiltration



Heavy Roots Impacting Flow



Major Cracks With Pieces Missing



System Blockage & Surcharge